

WHAT IS CLAIMED IS:

1. A fluidic compression device adapted to accommodate an external fixation device, comprising:

at least one fluid-impermeable bladder adapted to contain a fluid; and

5 at least one region adapted to receive and accommodate one or more external portions of an external fixation device;

the device adapted to be positioned about a portion of a user's body such that an opening formed within the region receives and accommodates the one or more external portions of the external fixation device, the device further adapted to apply
10 intermittent compression to the portion of the user's body according to intermittent increases and decreases in fluid pressure in the bladder while the device is positioned about the portion of the user's body and is accommodating the external fixation device.

15 2. The device of Claim 1, further comprising a seal defining the region in which the opening is formed, the seal separating the opening from the bladder and protecting the bladder from being perforated when the opening is formed.

20 3. The device of Claim 2, wherein the seal comprises a double seal.

4. The device of Claim 1, wherein the opening may be cut to customize the device to accommodate the external fixation device.

25 5. The device of Claim 4, further comprising one or more pre-formed holes adapted to receive a cutting device for cutting the opening.

6. The device of Claim 4, further comprising stitching within the region in which the opening is formed, the stitching helping to ensure that the opening is cut without compromising the integrity of the bladder.

7. The device of Claim 4, further comprising a visible cut line imprinted on the device within the region in which the opening is formed to provide a guide for cutting the opening to help prevent the bladder from being perforated during cutting.

5 8. The device of Claim 1, further comprising a connector coupled to the bladder and adapted to receive the fluid from a fluid source.

9. The device of Claim 8, wherein the connector comprises an integral valve operable to maintain a fluid pressure in the bladder.

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10. The device of Claim 1, further comprising one or more straps adapted to couple together opposing portions of the device to secure the device about the portion of the user's body.

15 11. The device of Claim 10, further comprising an opening formed in a strap adapted to allow one or more external portions of the external fixation device to pass through the strap.

20 12. The device of Claim 10, wherein the one or more straps comprise hook and loop material.

13. The device of Claim 1, further comprising:
a soft, foldable, and flexible internal foam material substantially encompassing the bladder; and
25 a soft, foldable, and flexible external woven material substantially covering the internal foam material.

14. The device of Claim 13, further comprising a rounded edge portion to improve comfort and prevent or reduce dermal ulcerations.

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15. A method for manufacturing a fluidic compression device adapted to accommodate an external fixation device, comprising:

providing at least one fluid-impermeable bladder adapted to contain a fluid;
and

5 providing at least one region adapted to receive and accommodate one or more external portions of an external fixation device;

such that the device is adapted to be positioned about a portion of a user's body such that an opening formed within the region receives and accommodates the one or more external portions of the external fixation device, and such that the device
10 is further adapted to apply intermittent compression to the portion of the user's body according to intermittent increases and decreases in fluid pressure in the bladder while the device is positioned about the portion of the user's body and is accommodating the external fixation device.

16. The method of Claim 15, further comprising providing a seal defining the region in which the opening is formed, the seal separating the opening from the bladder and protecting the bladder from being perforated when the opening is formed.

17. The method of Claim 16, wherein the seal comprises a double seal.

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18. The method of Claim 15, wherein the opening may be cut to customize the device to accommodate the external fixation device.

19. The method of Claim 18, further comprising providing one or more
25 pre-formed holes adapted to receive a cutting device for cutting the opening.

20. The method of Claim 18, further comprising providing stitching within the region in which the opening is formed, the stitching helping to ensure that the opening is cut without compromising the integrity of the bladder.

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21. The method of Claim 18, further comprising providing a visible cut line imprinted on the device within the region in which the opening is formed to

provide a guide for cutting the opening to help prevent the bladder from being perforated during cutting.

22. The method of Claim 15, further comprising providing a connector
5 coupled to the bladder and adapted to receive the fluid from a fluid source.

23. The method of Claim 22, wherein the connector comprises an integral valve operable to maintain a fluid pressure in the bladder.

10 24. The method of Claim 15, further comprising providing one or more straps adapted to couple together opposing portions of the device to secure the device about the portion of the user's body.

25. The method of Claim 24, further comprising providing an opening
15 formed in a strap adapted to allow one or more external portions of the external fixation device to pass through the strap.

26. The method of Claim 24, wherein the one or more straps comprise hook and loop material.
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27. The method of Claim 15, further comprising:
providing a soft, foldable, and flexible internal foam material substantially encompassing the bladder; and
providing a soft, foldable, and flexible external woven material substantially
25 covering the internal foam material.

28. The method of Claim 27, further comprising providing a rounded edge portion to improve comfort and prevent or reduce dermal ulcerations.

29. A method for preventing or treating circulation problems, comprising:
positioning a fluidic compression device about a portion of a user's body such
that at least one opening formed in a region of the device receives and accommodates
one or more external portions of an external fixation device;

5 at least partially filling at least one fluid-impermeable bladder of the device
with fluid; and

intermittently increasing and decreasing fluid pressure within the bladder to
apply intermittent compression to the portion of the user's body while the device is
positioned about the portion of the user's body and is accommodating the external
10 fixation device, the intermittent compression facilitating prevention or treatment of
circulation problems associated with the portion of the user's body.

30. The method of Claim 29, further comprising forming the opening
within a sealed region of the device.

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31. The method of Claim 29, wherein the device further comprises a seal
defining a region in which the opening is formed, the seal separating the opening from
the bladder and protecting the bladder from being perforated when the opening is
formed.

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32. The method of Claim 31, wherein the seal comprises a double seal.

33. The method of Claim 29, wherein the opening may be cut to customize
the device to accommodate the external fixation device.

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34. The method of Claim 33, wherein the device further comprises one or
more pre-formed holes adapted to receive a cutting device for cutting the opening.

35. The method of Claim 33, wherein the device further comprises
30 stitching within a region in which the opening is formed, the stitching helping to
ensure that the opening is cut without compromising the integrity of the bladder.

36. The method of Claim 33, wherein the device further comprises a visible cut line imprinted on the device within a region in which the opening is formed to provide a guide for cutting the opening to help prevent the bladder from being perforated during cutting.

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37. The method of Claim 29, wherein the device further comprises a connector coupled to the bladder and adapted to receive the fluid from a fluid source.

38. The method of Claim 37, wherein the connector comprises an integral valve operable to maintain a fluid pressure in the bladder.

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39. The method of Claim 29, further comprising using one or more straps to couple together opposing portions of the device to secure the device about the portion of the user's body.

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40. The method of Claim 39, wherein the device further comprises an opening formed in a strap adapted to allow one or more external portions of the external fixation device to pass through the strap.

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41. The method of Claim 39, wherein the one or more straps comprise hook and loop material.

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42. The method of Claim 29, wherein the device further comprises:
a soft, foldable, and flexible internal foam material substantially encompassing the bladder; and
a soft, foldable, and flexible external woven material substantially covering the internal foam material.

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43. The method of Claim 42, wherein the device further comprises a rounded edge portion to improve comfort and prevent or reduce dermal ulcerations.

44. A fluidic compression device adapted to accommodate an external fixation device, comprising:

first means for containing a fluid; and

second means for defining a region for receiving and accommodating one or
5 more external portions of an external fixation device;

the device adapted to be positioned about a portion of a user's body such that an opening formed in the region receives and accommodates the one or more external portions of the external fixation device, the device further adapted to apply intermittent compression to the portion of the user's body according to intermittent
10 increases and decreases in fluid pressure in the first means while the device is positioned about the portion of the user's body and is accommodating the external fixation device.

45. A fluidic compression device adapted to accommodate an external fixation device, comprising:

at least one fluid-impermeable bladder adapted to contain a fluid;

at least one sealed region comprising:

5 an opening cut to customize the device to receive and accommodate one or more external portions of an external fixation device, the seal separating the opening from the bladder and protecting the bladder from being perforated when the opening is cut;

one or more pre-formed holes adapted to receive a cutting device for
10 cutting the opening; and

stitching helping to ensure that the opening is cut without compromising the integrity of the bladder;

the device adapted to be positioned about a portion of a user's body such that the opening cut within the sealed region receives and accommodates the one or more
15 external portions of the external fixation device, the device further adapted to apply intermittent compression to the portion of the user's body according to intermittent increases and decreases in fluid pressure in the bladder while the device is positioned about the portion of the user's body and is accommodating the external fixation device.